7351

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

June 9, 2016

Sam Smith
Utah Sand & Gravel LLC
847 West 500 South
West Bountiful, Utah 84087

Subject: Second Review of Notice of Intention to Commence Large Mining Operations and Directive to Respond, Utah Sand & Gravel, North Salt Lake Mine, M/035/0051, Utah County, Utah

Dear Mr. Smith:

The Division of Oil, Gas and Mining has reviewed the referenced Notice of Intention to Commence Large Mining Operations (Notice) which was received May 6, 2016. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages for the original Notice using redline and strikeout text. After the Notice is determined technically complete, the Division will ask that you submit two clean copies of the complete Notice. Upon final approval, both copies will be stamped approved and one will be returned for your records.

Please submit your response to this review by July 15, 2016.

The Division will suspend further review of the Notice until receiving your response to this review. Please contact the lead for this project Leslie Heppler, at 801-538-5257 or me at 801-538-5261 if you have questions about the review or if you would like to schedule a meeting to discuss the comments. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB: lah: eb
Attachment: Review
cc: lynn.pace@slcgov.com, wayne.mills@slcgov.com, jasisson@slco.org
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1594 West North Temple, Suite 1210, Salt Lake City, UT 84116
PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

SECOND REVIEW OF NOTICEOF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Utah Sand & Gravel LLC
North Salt Lake LMO

M/035/0051
June 8, 2016

General Comments:

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	General	Please develop maps, figures and text with the understanding that they must be scanned and photocopied. This will require that hatching, line weights, colors, map labels, and text formatting should be clear and legible when digitally copied. (No specific response is required.)	OGM	
2	General	The Division will have additional comments based on the responses to this review. Please attempt to provide a complete, technically adequate submittal. (No specific response is required.)	lah	
3	General	While developing reclamation cost estimates, the Division must assume the site will be left in a worst-case scenario with the Division having to conduct the reclamation with State-approved contractors in the absence of the operator. Please develop the reclamation cost estimate with this understanding. (No specific response is required.)	OGM	
4	General	The reclamation cost estimate must take into account compliance with all applicable rules and regulations pertaining to worker and public health and safety, and the remediation, handling and disposal of regulated hazardous wastes. The Division is not exempt from complying with these statutes in the event it must undertake the reclamation. These rules include, but are not limited to: R307 (DEQ, Air Quality), R313 (DEQ, Waste Management and Radiation Control), R315 (DEQ, Waste Management), and R317 (DEQ, Water Quality). Supporting information is attached. (No specific response is required.)	OGM	
5	Appendix IV	Geotechnical Investigation a) The executive summary need to include the maximum toe to crest slope angle referred to in paragraph 3. This needs to match the requested variance, R647-4-112. b) Based on assumptions in the Geotechnical report to adjacent mine, the report should be reviewed on a five-year basis as with adjacent mine sites. Add a commitment to section 112. c) Section 6.2: Typo – stability. d) Section 6.4: Excavation recommendation for the Humbug formation should be included in the variance (112) and slope stability (109) sections of the Notice.	lah	

R647-4-105 - Maps, Drawings & Photographs

105.2 - Surface facilities map

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
6	Figure 4	*Previous Comment - Use a newer base map and add a list and description of the facilities. This will tie to the bond calculation sheets and be utilized in bond releases* New comment – Until such time as equipment has a post mining land use, please include all structures under demolition on the sheets.	lah	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
7	Page 7 & Figure 5	*Previous comment - Section 105.3, Reclamation Activities, refers to Figure 5 for reclamation activities. This map only shows final contours. A reclamation map is needed showing the various reclamation activities and treatments that will be used throughout the site, such as regrading , topsoil replacement (different depths), seeding methods, etc.* New comment - This comment was not addressed. See comment 8 below for further detail.	lk	
8	Figure 5	Figure 5 should be renamed "Reclamation Treatments Map," or "Reclamation Plan." It took several looks at it to see where the treatments identified in the legend were actually on the map. Please fade the background image to 50% transparency or more so that the treatment applications can be seen more clearly. Currently, the "Light Industrial Use" gray overlay is barely discernible, hatching for soil placement and reseeding is too light and spaced too widely for the benches, and the "Wildland Use" hatching on the plan is several times the spacing shown in the Legend. Photocopying this map for archiving would be problematic at best.	mpb	
9	Figures 5, 6, & 7	*Previous comment - The cross sections are incomplete and do not follow the text. At a minimum show the actual location of the section on the plane view maps, and include lines that delineate pre-mining, during mining, and final reclaimed slopes. Cross sections must match text. Do not use vertical exaggeration.* New comment – Add maximum slope angle for the highwalls, be consistent with text and geotech report, (such as 0.75H:1V max.	lah	
10	Figures 5 & 6	The cross sections in Figure 6 indicate that a shallow depression will be left at mine closure, assumed to be a capture area for stormwater. Please indicated the boundaries of this depression on Figure 5 using the standard symbol for a depressed area (an inwardly-hashed contour) and identify the area on Figure 5 with a callout.	mpb	

105.5 – Underground & 105.6 – Other maps

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
11	Figure 9	Refer to the location in the geotechnical report for the geologic units on the map, but in addition it would be best to add the geologic map name in the legend.	lah	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
12	Appx I, Fig. 11	Please show surface flow direction arrows on the SWPPP map.	mpb	
13	Appx I, Fig. 11	The SWPPP map shows a large retention area in a location that has yet to be mined out. The pit pond can be shown in the long run, i.e. Fig. 5, but effective retention areas should be active for the duration of mining activities and located down-gradient of disturbed working areas. The small retention area shown on the northwest boundary appears to capture runoff from only a small area of the disturbance, according to the contours shown. The stone check dams are located on a major access road into the site.	mpb	

R647-4-106 - Operation Plan

General Operation Comments

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
14		*Previous Comment - Due to the lack of information with the cross sections, more questions could be generated regarding the Operation Plan.* New comment – Please add an arrow on the pit floor area showing the direction of stormwater collection, and include the percent slope angle of the pit floor.	lah	

106.2 - Type of operations conducted, mining method, processing etc.

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
15	Omission	Please include a discussion of deleterious materials. Although it is highly unlikely that geologic deleterious or acid-forming materials will be exposed or generated at this site, the definition of deleterious materials in the R647 rules includes hazardous items and materials imported on site for use in the mining operation. These include hazardous building and infrastructure materials, as well as fuels, oils, lubricants, hydraulic fluid, antifreeze, etc. that are required by the Utah Department of Environmental Quality to be removed and disposed of according to various DEQ regulations. Please discuss how any such materials will be managed, what measures will be used to control exposure to the environment, and what cleanup methods will be employed in the event of any such environmental exposure.	mpb	
16	Omission	Please locate all fuel, oil, and other hazardous liquid storage tanks on a site facility plan and identify the contents and quantities of materials stored. This may be achievable with an inset enlargement of the Equipment Storage, Parking and Scale House area on Figure 4. Referencing a SPCC plan would be a suitable starting point for the discussion.	mpb	

106.5 - Existing soil types, location, amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
17	Page 9	*Previous Comment - The soil data provided is incomplete. Please provide results for the following additional parameters: texture, pH, EC (conductivity), percent organic matter, CEC (cation exchange capacity), phosphorus (as P_2O_5), and potassium (as K_2O).*	lk	
	Page 11	New Comment - The new soil analysis is questioned as to either the analysis done or the reporting parameters. Cation exchange capacity is extremely high (218) by an order of magnitude. Likewise potassium as K_2O is an order of magnitude higher than would be normally found in a fertile soil, 3688.59 mg/kg. Please have the laboratory verify these numbers, or as an alternative, submit a new sample. The Division suggests sending samples to a different laboratory for comparison.		
18	Page 10	*Previous Comment - Two to fifteen feet of soil material is not considered "relatively thin." For just the 12 acres of undisturbed area, this results in a range of 38,720 to 290,400 cubic yards of soil. This is considered a significant amount, and plans to salvage and stockpile topsoil for reclamation are needed (see R647-4-106.6).*	lk	
	Figure 4	New Comment – With the volume of soil apparently available, using only six inches for reclamation is not appropriate, especially on benches, unless there will be a subsoil layer placed before the topsoil. The revegetation plan under 110.5 says 12 inches of soil to be used; this conflict needs to be resolved. A minimum of two feet of unconsolidated material is needed for vegetation establishment (combination of subsoil and topsoil). With the estimated volume of topsoil available, a minimum of 12 inches of topsoil should be used. As discussed in our meeting, plans to reclaim the floor (as a contingency) are needed if the proposed light industrial use is not established, or if the Division has to forfeit the surety and do the reclamation. Soil material will be needed for this area as well.		

106.6 - Plan for protecting & re-depositing soils

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
19	Page 10	*Previous comment - Just because the topsoil is "relatively thin" is not adequate justification for not salvaging and stockpiling the topsoil for future reclamation purposes. Please provide plans to salvage and stockpile all topsoil and show locations of topsoil stockpiles, volumes of soil to be in each stockpile, and how soil stockpiles will be protected from erosion and further impacts.* New comment - Only one stockpile is shown on Figure 4. The Notice does not show the volume of material or how it will be protected from erosion and further impacts. Given the potential volume of soil available just from the expansion area, it is likely more than one stockpile will be needed. *Previous comment - Provide plans on how soil materials will be redistributed at the time of reclamation, including type(s) of equipment to be used, depth of soil replacement (it is recommended that a minimum of 12 inches be replace) and amendments/fertilizer that may be needed (to be determined after all soil analytical data is provided).* New Comment - Again here, the Notice says only six inches of soil material will be used for reclamation. Given the potential volume of soil available (just from the expansion area) a minimum of 12 inches needs to be utilized. Also state the type(s) of equipment needed for soil re-distribution. *Previous comment - If other material is to be used as a substitute soil, then a complete analysis for that material is needed as well, including: texture, pH, EC (conductivity), sodium adsorption ratio, percent organic matter, CEC (cation exchange capacity), total nitrogen, nitrate nitrogen, phosphorus (as P_2O_5), and potassium (as K_2O). The ratio of this material and the topsoil is needed, or if topsoil will be used in one area and the substitute materials used on another area, it needs to be identified on the reclamation map. Assuming the soil depth of 2-15 feet is correct, there should be sufficient soil material for reclamation of the entire site.* New Comment- The Notice did not discuss the use of substitute material, so it is assumed all available soils will be stockpiled and that there will be a sufficient amount for reclamation. Typically, for benches and pit floors, a minimum of two feet of unconsolidated material is needed (subsoil and topsoil combined). Also see comments made under R647-4-106.5. Even with the anomalies in the analysis noted, the use of fertilizers or other soil amendments are likely NOT needed or desirable.	lk	

106.8 – Depth to Groundwater, extent of overburden, geology

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
20	Page 14 para 4	New Comment - The geologic setting sections needs to refer to the geologic maps in both the maps and the geotechnical report. Include the description in the text on page 14 of the three geologic units that are mapped in the mine permit area. Additional comments can be generated in future reviews, based on future submittals.	lah	

106.10 - Amounts of material moved (including ore, waste, topsoil, etc.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
21	Page 11	*Previous Comment - No information is included about waste and topsoil piles.* New comment – For bonding purposes, stockpiles need to be accounted for "as worst-case scenario."	lah	

R647-4-109 - Impact Assessment

109.2 - Impacts to threatened & endangered wildlife/habitat

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
22	Page 12 Page 16	*Previous Comment - The Division is waiting for a report from the Fish and Wildlife Service before making comments about this section.* In addition to the Ute ladies' tresses mentioned in this section, the US Fish and Wildlife service also identified the yellow billed cuckoo as potentially inhabiting this area. However, closer examination found that there is a lack of habitat on this site. This needs to be added to the discussion in this section.	lk	

109.3 - Impacts on existing soils resources

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
23	Page 12	*Previous comment - This section does not—and needs to—discuss impact to the soil resources (past and future), such as volume of material, nature of impacts, or the extent of impact (spatially or in time), nor does it provide a discussion of plans to mitigate these impacts (refer to R647-4-109.5).* New Comment - This comment was not adequately addressed. In developing the impact analysis and mitigation plan (see 109.5), please refer to comments under R647-4-106.5 and 106.6,	lk	

109.4 - Slope stability, erosion control, air quality, safety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
24	Appx I, Fig. 11	As mentioned in previous comments about Section 105.5, the SWPPP map has some minor deficiencies. As seen by the flow patterns in the background aerial image used, runoff leaves the west corner of the site. A portion of the western corner of the area, shown as "track out," should be converted to retention area.	mpb	
25	Omission	A pre-demolition survey of all non-portable buildings will be required prior to removal in accordance with Utah Division of Air Quality R307-801-9 to determine the presence and amounts of asbestos-containing materials typically associated with building systems and building construction.	mpb	
26	Page 17 Para 1	Strike and dip are not consistent with Figure 9.	lah	

109.5 - Actions to mitigate any impacts

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
27	Omitted	See comments under 109.3.	lk	

R647-4-110 - Reclamation Plan

110.1 - Current & post mining land use

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
28	Page 13	*Previous comment - While Utah Sand and Gravel may not have post-mining plans for the property, there still will be a use of the property. If light manufacturing is not viable at the end of mine life, the operator is expected to reclaim the area to open space, which would require the removal of all facilities and structures, eliminating any public safety or environmental hazards, and establishing a diverse, perennial vegetative cover to stabilize and control erosion. Note, most of the above is discussed somewhere in the Notice, but should be at least summarized in this section.* New comment - This comment was not addressed. The operator needs to provide a contingency plan for reclaiming the entire site should the proposed post mining land use of light industrial not be a viable option for the pit floor area,	lk	

110.2 - Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
29	Page 13	*Previous comment - (See comments under 106.6 above.) Please describe how soil materials and seeding will take place with 100-foot lifts and 20-foot wide benches. Will there be access to the benches with equipment at the end of mine life, or will there be on-going reclamation before benches are abandoned to replace topsoil and revegetate?* New comment - This comment was not addressed.	lk	
30	Page 14	*Previous Comment - The Notice says, "Highwall berms will be left along those portions of the highwall and sidewall rim that are over five feet high." Is this referring to the height of the berm, or the height of the highwall and side wall rims? If referring to the height of the berm, this would leave the berm approximately 15 feet wide, which does not leave sufficient room for seeding equipment. Also, what is the volume of material needed to construct the berms, and where will it come from?* New Comment -While the operator identified the source of the berms, the Notice still does not address the remainder of this comment.	lk	

110.3 - Description of facilities to be left (post mining use)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
31	Page 14 Para 3	*Previous Comment - Post mining land use is noted under Section 110.1.* New Comment – Facilities will need to be bonded for the worst-case scenario.	lah	
32	18	The worst-case scenario is that the operator abandons the site and leaves the Division to reclaim. In this situation, all facilities, equipment, etc., would need to be removed from the site and the entire site would be reclaimed. The Notice needs to provide a reclamation plan for the entire site. If, at the end of mining, the proposed recycling plan is feasible, the Division would at that time approve facilities, etc., to remain.	lk	

110.4 – Treatment, location and disposition of deleterious or acid-forming material

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
33	Pg. 19	Please discuss how all hazardous (deleterious) materials identified in Section 106.2 will be removed and disposed of according to applicable UDEQ regulations. An information pamphlet from UDEQ has been provided to assist with identifying common hazardous materials requiring special handling and disposal methods.	mpb	

R647-4-112 - Variances

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
34	Omission	*Previous Comment - No variance has been requested for highwalls, which is contrary to cross sections and text.* New comment – Please include a statement under section 112: "The operator requests a variance based on the geotechnical report submitted as Appendix IV."	lah	

R647-4-113 – Surety – Review is not finished for section 113

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
35	Cash Surety	All operators that want to provide a cash surety must also provide an accurately completed **IRS Form W-9** with the cash deposit (Form W-8 for a company based outside the US). The bank where the State Treasurer will deposit the cash must approve and accept the form prior to the Division granting final approval of the permit. (General comment; no response needed for the Notice.)	OGM	
36	Omission	Please provide costs for on-site facilities demolition, removal and disposal.	mpb	

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
37	General Comment on Building Demolition	As mentioned in Section 109.4, a pre-demolition survey of all non-portable buildings will be required prior to removal to determine the presence and amounts of asbestos-containing materials typically associated with building systems and building construction. To address this issue, the Division suggests adding a 10 percent contingency to the demolition calculation for each building to cover the inspection survey and the costs of abatement and disposal of any regulated hazardous building materials.	mpb	
38	Omission	Please provide the backup data for the reclamation cost estimate shown on page 14. Use the Division's bond calculation sheets on its web site at www.ogm.utah.gov.	lah	
39	Page 15	The text indicate phase 1, but there is no other reference in the text to phase 1. Please make the text consistent throughout the Notice.	lah	